

WHAT IS CLAIMED IS:

1. An element for use in an annular metal belt, the annular metal belt transmitting torque between two pulleys each having a V-shaped groove, the element comprising a flank capable of making frictional contact with the V-shaped groove for transmission of torque;

wherein the flank comprises a plurality of threads disposed substantially parallel to one another and having a slight height relative to a dimension of the flank, the top section of each thread being substantially planar.

2. The element for use in an annular metal belt as defined in Claim 1, wherein the flank comprises a surface profile characterized in that:

at a depth Y in a range from 0 to 1.2  $\mu\text{m}$ , a total sectional area of the plurality of threads reaches 10% of the occupied area of the flank; and at a depth Y in a range from 0 to 4.8  $\mu\text{m}$ , a total sectional area of the plurality of threads reaches 40% of the occupied area of the flank; wherein the depth Y is measured from a top point of a highest thread and wherein a sectional area of the plurality of threads is perpendicular to a direction of depth.

3. The element for use in an annular metal belt as defined in Claim 2, wherein a bearing ratio curve obtained from the surface profile of the flank is positioned in a range defined by a function of  $Y(\mu\text{m}) = 3.3333X^3 - 2.3333X^2 + 0.6667X - 0.0267$  and a function of  $Y(\mu\text{m}) = -8.3333X^3 + 20.833X^2 + 3.3333X + 0.6667$ , where X is given by (total sectional area of the plurality of threads 20 at a depth  $Y(\mu\text{m})$  / (occupied area of the flank) .

4. The element for use in an annular metal belt as defined in Claim 1, wherein the flank comprises a surface profile characterized in that:

a total sectional area of the plurality of threads at a depth Y from a top point of a highest thread increases as the depth Y increases.

5. The element for use in an annular metal belt as defined in Claim 1, wherein the height of the plurality of threads of the flank is between 30 – 40 micrometers.

6. The element for use in an annular metal belt as defined in Claim 1, wherein a pitch of the threads is approximately 0.2 millimeters.

7. The element for use in an annular metal belt as defined in Claim 1, wherein the plurality of threads of the flank extend substantially in a direction of movement of the element.

8. The element for use in an annular metal belt as defined in Claim 1, wherein a length of each thread is substantially equal to a width of the flank at a location where each thread is disposed.

9. A metal belt having a plurality of connected elements, comprising at least one element defined in Claim 1, wherein the number of said at least one element is greater than or equal to 30% of the overall number of the plurality of connected elements.